REMARKS

Double Patenting

In paragraph 2 of the Office action, claims 1-13 and 31-41 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 7,447,720. Enclosed is a terminal disclaimer.

35 U.S.C. § 101

A. When the proper test is applied, the instant claims present patent-eligible subject matter.

In paragraph 4 of the Office action, claims 1-13 and 31-41 stand rejected under 35 U.S.C. § 101 "because the claimed invention is directed to non-statutory subject matter." It is respectfully submitted that the Office has applied an incorrect test to determine subject matter eligibility under § 101.

In paragraph 1 of the Office action, the examiner states:

> That is the claimed invention must transform an article or physical object to a different state or thing, or produce a useful, concrete and tangible result and not cover every substantial practical application. See *State Street*, 47 USPQ2d; *Benson*, 175 USPQ, and "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", OG Notices: . . . The extrema produce[d] by the claimed invention is not a real world result but merely a numerical value without a practical application recited in the claims that makes the result useful, concrete and tangible.

This is an incorrect statement of the test for determining if the subject matter of the claims is eligible for patent protection. In *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (*en banc*), the Federal Circuit held that the machine-or-transformation test, properly applied, is the governing test for determining patent eligibility of a process under § 101. The *Bilski* court further held that "the useful, concrete and tangible result inquiry is inadequate to determine whether a claim is patent-eligible under § 101." As stated in *Ex parte Marius A. Cornea-Hasegan*, Appeal No. 2008-4742, Application 10/328,572 (BPAI January 13, 2009):

> A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. Slip op. at 5, 6.

It is respectfully submitted that the instant Office action fails to provide an analysis under the "machine" branch of the test. Had such an analysis been performed, it is clear that the instant claims present patent-eligible subject matter.

Turning to independent claim 1, the method is clearly tied to an n-dimensional array of processing elements. The first step of the method is a determining step which is recited as taking place within each of the processing elements. The next step requires the serial outputting, in bursts, of local extrema from each of the processing elements to a neighboring processing element. The next step is a determining step which is recited as being carried out within each of the processing elements. The last step is saving the dimensional extrema in a register. Rather than being an abstract idea, the method of claim 1 is limited to being performed on an n-dimensional array of processing elements wherein specific steps are performed within each of the processing elements and specific steps are recited for how information is transferred between the processing elements. As such, the machine branch of the test for patent-eligible subject matter is satisfied.

With respect to claim 31, claim 31 recites a plurality of processing elements interconnected to form an n-dimensional array. Each of the processing element comprises an arithmetic logic unit, condition logic, a plurality of registers connected to a bus and responsive to the arithmetic logic unit, a result pipeline, an interface, and a register file. As such, this claim clearly recites a machine and thus satisfies the machine branch of the test for patent eligibility under § 101.

In view of the foregoing, it is respectfully requested that the rejection of claims 1-13 and 31-41 under 35 U.S.C. § 101 be withdrawn.

B. <u>At a minimum, the Office should issue a new action containing an analysis under the proper test.</u>

If the examiner remains unconvinced that the claims set forth patent-eligible subject matter under the machine branch of the test, then the appropriate course of action is to issue a

new, nonfinal, Office action containing an explanation of why the pending claims do not satisfy the machine branch of the test.

Applicant has made a diligent effort to place the instant application in condition for allowance. If the examiner is of the opinion that the instant application is not in condition for allowance, the examiner is respectfully requested to contact applicant's attorney at the telephone number below.

Respectfully submitted,

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